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### ABSTRACT

#### PURPOSE:

To assess the efficacy of a combination therapy of intravitreal ranibizumab together with a dexamethasone implant in comparison with ranibizumab monotherapy in neovascular age-related macular degeneration.

#### METHODS:

Forty eyes of recurrent or persistent neovascular age-related macular degeneration were included in this prospective study. Patients were randomly assigned to two groups. Based on a pro re nata treatment regimen, the first group received intravitreal ranibizumab monotherapy (IVM). The second group received a combination of intravitreal dexamethasone implant and ranibizumab (intravitreal combination [IVC]) at baseline and was retreated with ranibizumab as needed. A second dexamethasone implant was allowed for retreatment after at least 6 months. Retreatment criteria included evidence of subretinal fluid, cystoid macular edema or new hemorrhage, and/or a visual acuity decrease of 5 Early Treatment Diabetic Retinopathy Study letters.

#### RESULTS:

During 12 months, a mean of 7.95/5.5 (IVM/IVC;  $P = 0.042$ ) retreatments were given. The median time until first retreatment differed significantly between the groups ( $P = 0.004$ ). Functional variables could be maintained in both groups with no differences between them. Visual acuity changed from 62 letters at baseline to 67 at Month 12 in the IVM and remained stable at 68 letters in the IVC group ( $P = 0.68$ ); macular sensitivity changed from 6.95 dB to 7.01 dB in IVM and from 7.24 dB to 7.12 dB in IVC ( $P = 0.4$ ). Central retinal thickness decreased, however, with no difference between the groups ( $P = 0.38$ ). In the IVM/IVC group, 11/12 (55/60%) patients were phakic at the time of study entry. One (9%) patient from the IVM and 4 (33%) from the IVC group were referred to cataract surgery after study completion ( $P = 0.4$ ).

#### CONCLUSION:

This pilot study indicates combined therapy to delay retreatment in patients with persistent/recurrent neovascular age-related macular degeneration and an overall reduction in required ranibizumab retreatments compared with ranibizumab monotherapy with consistent functional outcomes.